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Washington, D.C. 20231,  
On September 12, 2001

The Law Offices of Jonathan Alan Quine

By Tracie Brooks  
Tracie Brooks

J1050 U.S. PTO  
09/954692  
09/12/01

Attorney Docket No. 02-020522US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Phillip A. Patten, *et al.*

Application No.: Not yet known

Filed:

For: METHODS AND COMPOSITIONS  
FOR POLYPEPTIDE ENGINEERING

Examiner: Unassigned

Art Unit: Unassigned

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR § 1.97 and  
§ 1.98

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

The references cited on attached PTO-1449 and 892 forms are being called to the attention of the Examiner to make of record references cited in parent application USSN 08/769,062 filed December 18, 1996. Pursuant to 37 CFR § 1.98(d), copies of references cited in parent application USSN 08/769,062 filed December 18, 1996 are not provided. Copy of 1449's from USSN 08/621,859 filed March 25, 1996 are included as well, as they were submitted in the parent application. However the applicants will gladly provided fresh copies of any references requested by the Examiner. It is respectfully requested that the cited

information on the previously submitted 1449 and 892 forms for application USSN 08/769,062 filed December 18, 1996 be expressly considered during the prosecution of this application, and that references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Christopher C. Sappenfield  
Reg. No. 45,073

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Alameda, CA 94501  
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Fax: (510) 337-7877

CCS: emg

<b>Substitute for form 1449A-B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <b>COPY FROM PARENT</b> <i>(use as many sheets as necessary)</i>	<b>Complete if Known</b>	
	Application Number	<del>09/717419</del> <i>Unassigned</i>
	Filing Date	<del>November 18, 2000</del> <i>Unassigned</i>
	First Named Inventor	<b>Phillip A. Patten</b>
	Group Art Unit	<b>1634</b>
	Examiner Name	<b>S. Zitomer</b>
	Attorney Docket Number	<del>02-020520US</del> <i>02-020522US</i>

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code (if known)			
	AA	5,427,930		Birkenmeyer et al.	06-27-1995	
	AB	5,792,607		Backman et al.	08-11-1998	

J1050 U.S. PTO  
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		Office	Number	Kind Code (if known)				

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
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	Application Number	<del>09/717449</del> <b>unassigned</b>
	Filing Date	<del>November 18, 2000</del> <b>unassigned</b>
	First Named Inventor	<b>Phillip A. Patten</b>
	Group Art Unit	<b>Unassigned</b>
	Examiner Name	<b>Unassigned</b>
Attorney Docket Number		<b>02-020520US 02-020522US</b>

U.S. PATENT DOCUMENTS						
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		Number	Kind Code (if known)			
	AA	6,096,548		Stemmer	08-01-2000	
	AB	6,117,679		Stemmer	09-12-2000	
	AC	6,132,970		Stemmer	10-17-2000	

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		Office	Number	Kind Code (if known)				
	AD	WO	98/42832		Cal Tech	10-01-1998		
	AE	WO	98/41653		Novo Nordisk	09-24-1998		
	AF	WO	99/29902		Cal Tech	06-17-1999		

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	AG	CARTER, "Improved Oligonucleotide-Directed Mutagenesis Using M13 Vectors," <u>Methods in Enzymology</u> , 154:382 (1987)		
	AH	KRAMER AND FRITZ, "Oligonucleotide-Directed Construction of Mutations via Gapped Duplex DNA," <u>Methods in Enzymology</u> , 154:350-367 (1987).		
	AI	KUNKEL, "Rapid and efficient site-specific mutagenesis without phenotypic selection," <u>PNAS</u> , 82:488-492 (Jan. 1985).		
	AJ	KUNKEL et al., "Rapid and Efficient Site-Specific Mutagenesis without Phenotypic Selection," <u>Methods in Enzymology</u> , 154:367-382 (1987).		
	AK	ZOLLER AND SMITH, "Oligonucleotide-Directed Mutagenesis: A Simple Method using Two Oligonucleotide Primers and a Single-Stranded DNA Template," <u>Methods in Enzymology</u> , 154:329 (1987).		
	AL	PRODROMOU et al., (1992) "Recursive PCR: a novel technique for total gene synthesis." <u>Protein Engineering</u> 5(8): 827-829.		
	AM	Statutory Declaration signed by Ruth Bird as filed in pending Australian opposition case, Australian Application No. 703264.		
	AN	Statutory Declaration signed by Ngaire Pettit-Young as filed in pending Australian opposition case, Australian Application No. 703264.		
	AO	Statutory Declaration signed by Mae Li Gan as filed in pending Australian opposition case, Australian Application No. 703264.		

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	Application Number	<del>00/717410</del> Unassigned
	Filing Date	<del>November 18, 2000</del> Unassigned
	First Named Inventor	Phillip A. Patten
	Group Art Unit	Unassigned
	Examiner Name	Unassigned
	Attorney Docket Number	<del>02-020520US</del> 02-020522US

AP	HIGUCHI et al., (1988) "A general method of <i>in vitro</i> preparation and specific mutagenesis of DNA fragments: study of protein and DNA interactions." <u>Nucleic Acids Research</u> 16(15): 7351-7367.
AQ	SHI et al., (1993) "Rapid PCR Construction of a Gene Containing Lym-1 Antibody Variable Regions." <u>PCR Methods and Applications</u> 3: 46-53.
AR	SHULDINER, A.R. et al., (1989) "Hybrid DNA artifact from PCR of closely related target sequences," <u>Nuc. Acids Res.</u> 17(11): 4409.
AS	SANDHU, G.S. et al., (1992) "Dual Asymmetric PCR: One-Step Construction of Synthetic Genes," <u>Biotechniques</u> 12(01): 14-16.
AT	Biotransformations, Pathogenesis, and Evolving Biotechnology, Program and Abstracts, Pseudomonas '89, American Society for Microbiology and The University of Illinois, July 9-13, 1989, Abstract Nos. 11-21 - 11-25, p. 26.
AU	SMITH et al. (1991) "Localized sex in bacteria," <u>Nature</u> , 349: 29-31.
AV	MICHAEL et al., (c. 1997) "Thermostable Ligase-Mediated Incorporation of Mutagenic Oligonucleotides During PCR Amplifications," <u>Methods in Molecular Biology</u> , Vol. 67, PCR Cloning Protocols: From Molecular Cloning to Genetic Engineering pp. 189-195.
AW	NER et al. (1988) "Laboratory Methods: A Simple and Efficient Procedure for Generating Random Point Mutations and for Codon Replacements Using Mixed Oligodeoxynucleotides," <u>DNA</u> 7: 127-134.
AX	MERYHANS et al., (1990) "DNA recombination during PCR," <u>Nuc Acids Res.</u> 18(7): 1687-1691.
AY	WEBBER et al. (1983) "Formation of gene coding for hybrid proteins by recombination between related cloned genes in <i>E. coli</i> ." <u>Nuc. Acids Res.</u> 11(16): 5661-5669.
AZ	POMPON et al. (1989) "Protein engineering by cDNA recombination in yeasts, shuffling of mammalian cytochrome P-450 functions." <u>Gene</u> 83: 15-24.
BA	HORTON et al. (1990) "Gene splicing by overlap extension: Tailor-made genes using the polymerase chain reaction." <u>Biotechniques</u> 8(5): 528-535.
BB	KLUG et al. (1991) "Creating chimeric molecules by PCR directed homologous DNA recombination." <u>Nuc. Acids Res.</u> 19(10): 2793.
BC	ROUWENDAL et al., (1993) "Simultaneous Mutagenesis of Multiple Sites: Application of the Urase Chain Reaction Using PCR Products instead of Oligonucleotides." <u>Biotechniques</u> 15(1): 68-70, 72-74, 76.

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Substitute for form 1449A-B/PTO  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  <b>COPY FROM PARENT</b> <small>(to be filed in any case where necessary)</small>	Complete if Known	
	Application Number	<del>08/05,002</del> Unassigned
	Filing Date	<del>December 18, 1996</del> Unassigned
	First Named Inventor	Phillip A. Patten
	Group Art Unit	1634
	Examiner Name	Zitomer, S.
	Attorney Docket Number	<del>02-020500US</del> 02-020522US

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appeal
		Number	Kind Code (if known)			
	AA	4,766,106		Katre et al.	08-23-1988	
	AB	4,795,699		Tabor et al.	01-03-1989	
	AC	4,816,567		Cahilly et al.	03-28-1989	
	AD	4,902,502		Nitecki et al.	02-20-1990	
	AE	5,264,563		Huse	11-23-1993	
	AF	5,314,809		Erllich et al.	05-24-1994	
	AG	5,512,463		Stemmer	04-30-1996	
	AH	5,514,568		Stemmer	05-07-1996	
	AI	5,514,588		Varadaraj	05-07-1996	
	AJ	5,523,388		Huse	06-04-1996	
	AK	5,541,311		Dahlberg et al.	07-30-1996	
	AL	5,547,859		Goodman et al.	08-20-1996	
	AM	5,574,205		Kucherlapati et al.	11-12-1996	
	AN	5,667,974		Birkenmeyer et al.	09-16-1997	
	AO	5,698,426		Huse	12-16-1997	
	AP	5,756,316		Schellenberger	05-26-1998	
	AQ	5,770,434		Huse	06-23-1998	
	AR	5,808,022		Huse	09-15-1998	
	AS	5,824,496		Horwitz et al.	10-20-1998	
	AT	5,830,696		Short	11-03-1998	
	AU	5,843,643		Ratner	12-01-1998	
	AV	5,858,725		Crowe	01-12-1999	
	AW	5,866,363		Pieczenic	02-02-1999	
	AX	5,871,974		Huse	02-16-1999	
	AY	5,877,402		Maliga et al.	03-02-1999	
	AZ	5,885,813		Davis et al.	03-23-1999	
	BA	5,928,905		Stemmer et al.	07-27-1999	

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Substitute for form 1449A-B/PTO

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

**COPY FROM PARENT**  
(use as many sheets as necessary)

Complete if Known

Application Number	<del>08/769,062</del> Unassigned
Filing Date	<del>December 18, 1996</del> Unassigned
First Named Inventor	Phillip A. Patten
Group Art Unit	1634
Examiner Name	Zitomer, S.
Attorney Docket Number	<del>02-020500US</del> 02-020522US

	BB	5,955,358		Huse	09-21-1999	
	BC	5,965,415		Radman et al.	10-12-1999	
	BD	6,001,574		Short	12-14-1999	
	BE	6,004,788		Short	12-21-1999	
	BF	6,015,694		Dubenskey et al.	01-18-2000	
	BG	6,000,710		Short	02-29-2000	
	BH	6,051,049		Hansen et al.	04-18-2000	
	BI	6,054,267		Short	04-25-2000	
	BJ	6,057,103		Short	05-02-2000	
	BK	6,071,889		Weiss et al.	06-06-2000	
	BL	6,074,853		Pati et al.	06-13-2000	
	BM	6,087,177		Wohlstadter	07-11-2000	
	BN	6,093,873		Chambon et al.	07-25-2000	
	BO	6,096,548		Stemmer	08-01-2000	
	BP	6,114,115		Wagner, Jr.	09-05-2000	
	BQ	6,117,679		Stemmer	09-12-2000	
	BR	6,132,970		Stemmer	10-17-2000	
	BS	6,153,410		Arnold et al.	11-28-2000	
	BT	6,159,687		Vind	12-12-2000	
	BU	6,171,820	B1	Short	01-09-2001	
	BV	6,174,673	B1	Short et al.	01-16-2001	
	BW	6,168,919	B1	Short	01-02-2001	
	BX	6,177,263	B1	Arnold et al.	01-23-2001	
	BY	5,795,747		Henco	08-18-1998	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	BZ	EP	0 544 809	B1	lxsys, Inc.	12-16-1998		
	CA	EP	0 563 296	B1	lxsys, Inc.	03-17-1999		

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	Application Number	<del>08/769,062</del> <b>Unassigned</b>
	Filing Date	<del>December 18, 1996</del> <b>Unassigned</b>
	First Named Inventor	<b>Phillip A. Patten</b>
	Group Art Unit	<b>1634</b>
	Examiner Name	<b>Zitomer, S.</b>
Attorney Docket Number		<b>02-020500US 02-020522US</b>

	CB	EP	0 552 266	B1	The Wellcome Foundation LTD.	01-19-2000		
	CC	EP	0 397 463	A2	Berlex Laboratories	11-14-1990		
	CD	EP	0 397 463	A3	Berlex Laboratories	11-14-1990		
	CE	WO	90/14424	A1	Scripps Clinic and Research Foundation	11-29-1990		
	CF	WO	92/06176	A1	IXSYS, Inc	04-16-1992		
	CG	WO	92/18645	A1	Henco	10-29-1992		
	CH	WO	93/01282	A1	Berlex Laboratories, Inc.	01-21-1993		
	CI	WO	93/18175	A1	Life Technologies, Inc.	09-16-1993		
	CJ	WO	93/19172	A1	Cambridge Antibody Technology LTD.	09-30-1993		
	CK	WO	94/11496	A1	IXSYS, Inc	05-26-1994		
	CL	WO	97/46670	A1	Massachusetts Institute of Technology	12-11-1997		
	CM	WO	99/29902	A1	California Institute of Technology	06-17-1999		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
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	CN	ADEY ET AL. "Preparation of second-generation phage libraries." <i>Proteins</i> 227-291. (1996)	
	CO	Berger et al. "Prospective: Expanding the Potential of Restriction Endonucleases: Use of Hapaxotermistic Enzymes." <i>Anal Biochemistry</i> 222:1-8 (1994)	
	CP	Biotransformations <i>Amer Soc. Abstract</i> no.11-21&11-25 Pg.26 (July 1989)	
	CQ	CARTER "Improved Oligonucleotide-Directed Mutagenesis Using M13 Vectors." <i>Methods of Enzymology</i> 154:382-403 (1985)	
	CR	COLLET ET AL. "A binary plasmid system for shuffling combinational antibody libraries." <i>Proc. Natl. Acad. Sci. USA</i> 89(21):L10026-10030 (1992)	
	CS	DANGL ET AL. "Rapid Isolation of Cloned Isotype Switch Variants Using Fluorescent Activated Cell Sorting." <i>Cytometry</i> 2(6):395-401 (1982)	
	CT	DIERICK ET AL. "Incorporation of dITP of 7-deaza dGTP during PCR improves sequencing of the product." <i>Nuc. Acid Res.</i> 21(18):4427-4428 (1993)	
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	First Named Inventor	<b>Phillip A. Patten</b>
	Group Art Unit	<b>1634</b>
	Examiner Name	<b>Zitomer, S.</b>
	Attorney Docket Number	<del>02-020500US</del> <b>02-D20522US</b>

CU	FULLEN ET AL. "Genetic Algorithms and Recursive Ensemble Mutagenesis in Protein Engineering." Complex. Inrt.94, from website (1992)	
CV	HEDA ET AL. "A simple in vitro site directed mutagenesis of concatamerized cDNA by inverse polymerase chain reaction." <i>Nuc. Acids Res.</i> 20(19):5241-5242 (1992)	
CW	HIGUCHI ET AL. "A general method of in vitro preparation and specific mutagenesis of DNA fragments study of protein and DNA interactions." <i>Nuc. Acids Res.</i> 16(15):7351-7367 (1988)	
CX	HODGSON "The Whys and Wherefores of DNA Amplification." <i>Biotechnology</i> 11(8):940-942 (1993)	
CY	Kang et al. Antibody redesigned by chain shuffling from random combinatorial immunoglobulin libraries." <i>Proc. Natl. Acad. Sci. USA</i> 88(24):11120-11123 (1991)	
CZ	KLUG ET AL. "Creating chimeric molecules by PCR directed homologous DNA recombination." <i>Nuc Acids.Res.</i> 19(10):2793 (1991)	
DA	KOMANO ET AL. "Distribution of Shufflon among IncI Plasmids." <i>J. Bacteriology</i> 169(11):5317-5319. (1987)	
DB	KOMANO ET AL. "Physical and Genetic Analysis of IncI2 Plasmid R721: Evidence for the Presence of Shufflon." <i>Plasmid</i> 23:248-251. (1991)	
DC	KRAMER & FRITZ "Oligonucleotide-Directed Construction of Mutations via Gapped Duplex DNA." <i>Methods of Enzymology</i> 154:350-367 (1978)	
DD	Kunkel "Rapid and Efficient Site-Specific Mutagenesis without Phenotypic Selection." <i>Methods in Enzymology</i> 154:367-382 (1987)	
DE	KUNKEL "Rapid and efficient site-specific mutagenesis without phenotype selection." <i>Proc. Natl. Acad. Sci USA</i> 82:488-492 (1985)	
DF	LOWNAM ET AL. "Affinity Maturation of Human Growth Hormone by Monovalent Phage Display." <i>J. Mol. Biol.</i> 234:654-578 (1993)	
DG	MAJUMDER "Ligation-free gene synthesis by PCR: synthesis and mutagenesis at multiple loci of a chimeric gene encoding OmpA signal peptide and hirudin." <i>Gene</i> 110(1):89-94 (1992)	
DH	MERYHANS ET AL. "DNA recombination during PCR." <i>Nuc Acids.Res.</i> 18(7):1687-1691 (1990)	
DI	MICHAEL "Thermostable Ligase-Mediated Incorporation of Mutagenic Oligonucleotides During PCR Amplification." <i>Meth. In Mol Biol.</i> 67:189-195 (1997)	
DJ	NER ET AL. "Laboratory Methods." <i>DNA</i> 7:127-134 (1988)	
DK	OLSEN ET AL. "Hybrid Baccillus (1-3,1-4)- $\beta$ -glucanases: engineering thermostable enzymes by construction of hybrid genes." <i>Mol. Gen. Genet</i> 225(2):-177-185 (1987)	
DL	REIKOFSKI & TAO "Polymerase Chain Reaction (PCR) Techniques for Site-directed Mutagenesis." <i>Biotech Adv.</i> 10:535-547(1992)	
DM	ROBLES ET AL. "Hydropathy and Molar Volume Constraints on Combinatorial Mutants of the Photosynthetic Reaction Center." <i>J.Mol.Biol.</i> , 232:242-252 (1993)	
DN	ROUWENDAL ET AL. "Simultaneous Mutagenesis of Multiple Sites: Application of the Ligase Chain Reaction Using PCR Products Instead of Oligonucleotides." <i>Biotechniques</i> 15(1):68-70, 72-74, 76 (1993)	
DO	SANDHU ET AL. "Dual Asymmetric PCR: One-Step Construction of Synthetic Genes." <i>Biotechniques</i> 12(01):14-16 (1992)	

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	First Named Inventor	Phillip A. Patten
	Group Art Unit	1634
	Examiner Name	Zitomer, S.
Attorney Docket Number		02-020500US-02-020522US

DP	SHI ET AL. "Rapid PCR Construction of a Gene Cotaining Lym-1 Antibody Variable Regions." <i>PCS Meth. &amp; Appl.</i> 3:46-52 (1993)	
DQ	SHULDINER ET AL. "Hybrid DNA artifact from PCR of closely related target sequences." <i>Nus. Acids Res.</i> 17(11):4409 (1989)	
DR	SMITH ET AL. "Localized sex in Bacteria." <i>Nature</i> 349:29-31 (1991)	
DS	Statutory Declaration by Mae Li Gan No. 703264	

DU	Statutory Declaration by Ruth Bird No. 703264	
DV	STEMMER ET AL. "A 20-Minute Ethidium Bromide High-slat Extraction Protocol for Pasmid DNA." <i>Biotechniques</i> 10(6):726 (1991)	
DW	STEMMER ET AL. "Enzymatic Inverse PCR- A Restriction Cite Independent, Single-Fragment Method for High-Efficiency, Site-Directed Mutagenesis." <i>Biotechniques</i> 13(2):214. (1992)	
DX	STEMMER ET AL. (1991) R342 "Expression of Antibody By Fragments Specific for a Heavy Metal Chelate (indium EDTA) in E-Coli." <i>J. Cell Biochem</i> 217	
DY	STEMMER ET AL. "Increased Antibody Expression for Escherichia-Coli Through Wobble-Base Library Mutagenesis by Enzymatic Inverse PCR." <i>Gene</i> 123(1):1-7. (1993)	
DZ	WU ET AL. "Allale-specific enzymatic amplification of $\beta$ -globin genomis DNA for diagnosis of sickle cell anema." <i>Proc. Natl. Acad. Sci</i> Vol 86:2757-2760. (1999)	
EA	ZOLLER & SMITH "Oligonucleotide-Directed Mutagenesis: A Simple Method using Two Oligonucleotide Primers and a Single-Stranded DNA Template." <i>Methods in Enzymology</i> 154:329-347 (1987)	

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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>Substitute for form 1449A-B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <b>COPY FROM PARENT</b> <i>(use as many sheets as necessary)</i>	<b>Complete if Known</b>	
	Application Number	<del>08/769,082</del> <b>Unassigned</b>
	Filing Date	<del>December 18, 1996</del> <b>unassigned</b>
	First Named Inventor	<b>Phillip A. Patten</b>
	Group Art Unit	<b>1634</b>
	Examiner Name	<b>Zitomer, S.</b>
	Attorney Docket Number	<b>02-020500US-02-020522US</b>

U.S. PATENT DOCUMENTS						
Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code (if known)			
	AA	5,665,859		Wallach et al.	09-09-1997	
	AB	5,741,694		Hasrtup et al.	04-21-1998	
	AC	5,750,373		Garrard et al.	05-12-1998	
	AD	5,427,930		Birkenmeyer et al.	06-27-1995	
	AE	5,792,607		Backman et al.	08-11-1998	

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09/12/01

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Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T

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Approved for use through 10/31/99. OMB 0651-0031

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Complete if Known

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

Application Number ~~08/760,062~~ *unassigned*  
 Filing Date ~~December 18, 1996~~ *unassigned*  
 First Named Inventor **Phillip A. Patten**  
 Group Art Unit **1634**  
 Examiner Name **Zitomer, S.**  
 Attorney Docket Number ~~02-020500US~~ *02-020522US*

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		Number	Kind Code (if known)			
	AA	5,976,862		Kauffman et al.	11/02/1999	

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## FOREIGN PATENT DOCUMENTS

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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

Complete if Known

Application Number 08/769,062 Unassigned  
 Filing Date December 18, 1996 Unassigned  
 First Named Inventor Phillip A. Patten  
 Group Art Unit 1634  
 Examiner Name Zitomer, S.  
 Attorney Docket Number 02-020500US-02-020522US

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		Number	Kind Code (if known)			
	AA	4,683,202		Mullis	07-28-1987	
	AB	4,800,159		Mullis et al.	01-24-1989	
	AC	4,965,188		Mullis et al.	10-23-1990	
	AD	5,023,171		Ho	06-11-1991	
	AE	5,176,995		Sninsky et al.	01-05-1993	
	AF	5,187,083		Mullis	02-16-1993	
	AG	5,234,824		Mullis	08-10-1993	
	AH	5,502,167		Waldmann	03-26-1996	
	AI	5,556,772		Sorge et al.	09-17-1996	
	AJ	5,714,316		Weiner et al.	02-03-1998	
	AK	5,851,813		Desrosiers	12-22-1998	
	AL	5,858,725		Crowe et al.	01-12-1999	

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		Office	Number	Kind Code (if known)				
	AM	WO	90/14430		Scripps Clinic & Research Found.	11-29-1990		
	AN	WO	91/06570		Univ. of Melbourne	05-16-1991		
	AO	WO	92/07075		Wellcome Foundation Ltd.	04-30-1992		
	AP	WO	93/02191		Wellcome Foundation Ltd.	02-04-1993		
	AQ	WO	93/06213		MRC	04-01-1993		
	AR	WO	93/11237		Wellcome Foundation Ltd.	06-10-1993		
	AS	WO	93/15208		Genzyme Ltd.	08-05-1993		
	AT	WO	93/16192		Wellcome Foundation Ltd.	08-19-1993		

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Considered

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Application Number	<del>00/769,062</del> <i>unassigned</i>
Filing Date	<del>December 18, 1996</del> <i>unassigned</i>
First Named Inventor	Phillip A. Patten
Group Art Unit	1634
Examiner Name	Zitomer, S.
Attorney Docket Number	<del>02-020500US</del> <i>02-020522US</i>

AU	WO	93/18141	Biogen, Inc.	09-16-1993
AV	WO	93/25237	City of Hope	12-23-1993
AW	WO	94/03596	Univ. of Hawaii	02-17-1994
AX	WO	94/09817	City of Hope	05-11-1994
AY	WO	94/13804	Cambridge Antibody Tech. Ltd. Medical Res. Council	06-23-1994

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	AZ	Delgrave et al., (1993) Bio/Technology <u>11</u> :1548-1552	
	BA	Goldman, E.R. and Youvan D.C., (1992) Bio/Technology <u>10</u> :1557-1561	
	BB	Joyce, G.F., (1992) Scientific American, December, 90-97	
	BC	Bock, L.C., et al., (1992) Nature <u>355</u> :564-566	
	BD	Scott, J.K. and Smith G.P., (1990) Science <u>249</u> :386-390	
	BE	Cwirla, S.E. et al., (1990) Proc Nat'l Acad Sci USA <u>87</u> :6378-6382	
	BF	McCafferty, J. et al., (1990) Nature <u>348</u> :552-554	
	BG	Cull, M.G. et al., (1992) Proc Natl Acad Sci USA <u>89</u> :1865-1869	
	BH	Nissim et al., (1994) ENBO J <u>13</u> :692-698	
	BI	Krishnan et al., (1991) Nucleic Acids Res. <u>19</u> (22):6177-6182	
	BJ	Klug et al., (1991) Nucleic Acids Res. <u>19</u> (10):2793	
	BK	Daugherty et al., (1991) Nucleic Acids Res. <u>19</u> :2471-2476	
	BL	Yolov et al. (1990) Nucleic Acids Res. <u>18</u> :3983-3986	
	BM	Jayaraman et al. (1991) Proc Natl Acad Sci USA <u>88</u> :4084-4088	
	BN	Morl, M and Schmelzer, C. (1990) Nucleic Acids Res. <u>18</u> (22):6545-6551	
	BO	Mullis et al., (1986) Cold Harbor Spring Symposia on Quantitative Biology <u>51</u> :263-273	
	BP	Sikorski et al., (1991) Methods in Enzymology <u>194</u> :302-318	
	BQ	Mullis et al., (1987) Methods in Enzymology <u>155</u> :335-350	

Examiner Signature		Date Considered	
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Application Number	<del>08/769,082</del> <i>unassigned</i>
Filing Date	<del>December 18, 1996</del> <i>unassigned</i>
First Named Inventor	Phillip A. Patten
Group Art Unit	1634
Examiner Name	Zitomer, S.
Attorney Docket Number	<del>02-020500US</del> <i>02-020522US</i>

BR	Scharf et al., (1986) Science <u>233</u> :1076-1078
BS	Saiki et al., (1988) Science <u>239</u> :487-491
BT	Saiki et al., (1986) Nature <u>324</u> (13):163-166
BU	Saiki et al., (1985) Science <u>230</u> :1350-1354
BV	Saiki et al., (1988) New Eng J Med <u>319</u> (9):537-541
BW	Crameri et al., (1993) Nucleic Acids Res. <u>21</u> (18):4410
BX	Villareal XC et al., (1991) Anal Biochem. <u>197</u> (2):362-367
BY	Jones et al., (1991) <i>Biotechniques</i> <u>10</u> (1):62-66
BZ	Weissenhorn et al., (1991) Gene <u>106</u> (2):273-277
CA	Majumder et al., (1992) Gene <u>110</u> (1):89-94
CB	Yao et al., (1992) PCR Methods Appl <u>1</u> (3):205-207
CC	Atreya et al (1992) Plant Mol Biol. <u>19</u> (3):517-522
CD	Zoller et al., (1992) Curr Opin Biotechnol. <u>3</u> (4):348-354
CE	Heda et al., (1992) Nucleic Acid Res. <u>20</u> (19):5241-5242
CF	Horton et al., (1993) Methods Enzymol <u>217</u> :270-279
CG	The whys and wherefores of DNA amplification. Biotechnology (NY). 1993 Aug; <u>11</u> (8):940-942
CH	Clackson et al., (1991) Nature <u>352</u> (6336):624-628
CI	Smith et al., (1993) PCR Methods Appl. <u>2</u> (3):253-257
CJ	Weisberg et al., (1993) <i>Biotechniques</i> <u>15</u> (1):68-70, 72-4, 76.
CK	Marks, et al., (1991) J Mol Biol <u>222</u> (3):581-597
CL	Harlow et al., (1994) Methods Mol Biol <u>31</u> :87-96
CM	Yon et al., (1989) Nucleic Acids Res. <u>17</u> (12):4895
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CO	Horton et al., (1990) <i>Biotechniques</i> <u>8</u> (5):528-535
CP	Osuna et al. (1991) Gene <u>106</u> :7-12
CQ	Dube et al. (1991) Biochemistry <u>30</u> (51):11760-7
CR	Ghosh et al., (1991) Biochem <u>30</u> :11767-74
CS	Paabo et al., (1990) J Biol Chem <u>265</u> (8):4718-4721

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	Application Number	<del>08/769,062</del> <b>unassigned</b>
	Filing Date	<del>December 18, 1996</del> <b>unassigned</b>
	First Named Inventor	<b>Phillip A. Patten</b>
	Group Art Unit	<b>1634</b>
	Examiner Name	<b>Zitomer, S.</b>
	Attorney Docket Number	<del>02-020500US</del> <b>02-020522US</b>

CT	Sambrook et al., (1989) Molecular cloning, A Laboratory Manual, 2 <sup>nd</sup> Edition, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York.
CU	Opposition by Diversa Corporation filed in the matter of Australian Application 703264 Affymax Technology NV, September 23, 1999.

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Application Number	<del>08/769,062</del> Unassigned
Filing Date	<del>December 18, 1996</del> Unassigned
First Named Inventor	Phillip A. Patten
Group Art Unit	1634
Examiner Name	Zitomer, S.
Attorney Docket Number	<del>02-020500US</del> 02-020522US

## U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code (if known)			
	CV	5,958,672		Short	09-28-1999	
	CW	5,965,408		Short	10-12-1999	

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09/954692

09/12/01

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## OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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INFORMATION DISCLOSURE  
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Application Number ~~08/769,002~~ *unassigned*  
 Filing Date ~~December 18, 1996~~ *unassigned*  
 First Named Inventor **Phillip A. Patten**  
 Group Art Unit **1634**  
 Examiner Name **Zitomer, S.**  
 Attorney Docket Number ~~02-020500US~~ *02-020522US*

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		Number	Kind Code (if known)			
	AA	5,939,250		Short	08/17/1999	

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 09/954692  
 09/12/01

## FOREIGN PATENT DOCUMENTS

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Application Number	<del>08/769,962</del> <i>unassigned</i>
Filing Date	<del>December 18, 1996</del> <i>unassigned</i>
First Named Inventor	Phillip A. Patten
Group Art Unit	1634
Examiner Name	Zitomer, S.
Attorney Docket Number	<del>02-020500US</del> <i>02-020522US</i>

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Page 1 of 2

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Filing Date	<del>December 18, 1996</del> <i>unassigned</i>
First Named Inventor	Phillip A. Patten
Group Art Unit	1634
Examiner Name	Zitomer, S.
Attorney Docket Number	<del>02-020500US</del> <i>02-020522US</i>


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		JONES, ET AL., DNA Mutagenesis and Recombination. Nature. April 19, 1990, pages 793-794, Vol. 344,	
		PRODROMOU et al., PROTOCOL: Recursive PCR: a novel technique for total gene synthesis, Protein Engineering, 1992, pages 827-829, Vol. 5, No. 8. Oxford University Press,	
		BENDIXEN, et al. A Yeast Mating-Selection Scheme for Detection of Protein-Protein Interactions. Nucleic Acids Research, 1994, pages 1778-1779, Vol. 22, No. 9,	
		MANDECKI, et al, FokI method of gene synthesis (Recombinant DNA; oligodeoxyribonucleotide; bridge mutagenesis; cloning; gene assembly; HIV) Gene. 1988. Pages 101-107, Vol. 68, Elsevier Science Publishers	
		REISKOFSKI et al., Polymerase Chain Reaction (PCR) Techniques for Site-Directed Mutagenesis. Biotech. Adv. 1992, pages 535-547, Vol. 10, Pergamon Press, Ltd, Great Britain	

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<b>FORM PTO-1449 (Modified)</b> <b>LIST OF PATENTS AND PUBLICATIONS FOR</b> <b>APPLICANT'S INFORMATION DISCLOSURE</b> <b>STATEMENT (Use several sheets if necessary)</b>			Attorney Docket No.: 18097 02-025225 Applicant: Stemmer et al. Filing Date: March 25, 1996		Application No.: 08/621,855 Group: 1634 <i>unassigned</i>	
Reference Designation			U.S. PATENT DOCUMENTS			Page: 1
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
FOREIGN PATENT DOCUMENTS						
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AA	WO 95/17413	6/29/95	PCT			
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)						
EXAMINER			DATE CONSIDERED			

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 09/12/01

<b>FORM PTO-1449 (Modified)</b> <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)</b>			Attorney Docket No.: <del>18097-1</del> <del>02-025224</del>		Application No.: <del>08/621,859</del> <i>unassigned</i>		
Applicant: Stemmer et al.			Filing Date: March 25, 1996		Group: 1634		

  

Reference Designation				U.S. PATENT DOCUMENTS			Page: 1
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)	
AA	5,824,485	10/20/98	Thompson et al.				
AB	5,783,431	7/21/98	Peterson et al.				
AC	5,629,179	5/13/97	Mierendorf et al.				

  

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AD	WO 98/42832	10/1/98	PCT			
AE	WO 98/41653	9/24/98	PCT			
AF	WO 98/41623	9/24/98	PCT			
AG	WO 98/41622	9/24/98	PCT			
AH	WO 98/28416	7/2/98	PCT			
AI	WO 98/01581	1/15/98	PCT			
AJ	WO 97/35966	10/2/97	PCT			
AK	WO 97/25410	7/17/97	PCT			
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AM	Fisch et al., "A Strategy Of Exon Shuffling For Making Large Peptide Repertoires Displayed On Filamentous Bacteriophage", <u>Proc Natl Acad Sci USA</u> , 93(15):7761-7766 (1996)
AN	Marton et al., "DNA Nicking Favors PCR Recombination", <u>Nucleic Acids Res.</u> , 19(9):2423-2426 (1991)
AO	Winter et al., "Making Antibodies By Phage Display Technology", <u>Ann. Rev. Immunol.</u> , 12:433-455 (1994)
AP	Greener et al., "An Efficient Random Mutagenesis Technique Using An E. coli Mutator Strain", <u>Methods in Molecular Biology</u> , 57:375-385 (1995)
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Group: 1634

Page 2

Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date
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AC	5,837,458	11/17/98	Minshull et al.			

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AE	WO 91/15581	10/17/91	PCT			
AF	WO 91/16427	10/31/91	PCT			
AG	WO 95/22625	08/24/95	PCT			
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___ AJ	Bartel et al., "Isolation of New Ribozymes From a Large Pool of Random Sequences", <u>Science</u> , 261:1411-1413 (1993)
___ AK	Crameri et al., "Combinatorial Multiple Cassette Mutagenesis Creates All The Permutations Of Mutant And Wild-Type Sequences", <u>Biotechniques</u> , 18(2):194-196 (1995)
___ AL	Crameri et al., "Improved Green Fluorescent Protein By Molecular Evolution Using DNA Shuffling", <u>Nat. Biotechnol.</u> , 14(3):315-319 (1996) (previously submitted)
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___ AP	Gates et al., "Affinity Selective Isolation Of Ligands From Peptide Libraries Through Display On A Lac Repressor 'Headpiece Dimer'", <u>J. Mol. Biol.</u> , 255(3):373-386 (1996) (previously submitted)
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FORM PTO-1449 (Modified)

Attorney Docket No.: ~~1809-02-020220~~ Application No.: ~~08/621,819~~LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT (Use several sheets if necessary)Applicant: Stemmer et al. *masque*

Filing Date: March 25, 1996

Group: 1634

<u>    </u> AZ	Zhang et al., "Directed Evolution Of A Fucosidase From A Galactosidase By DNA Shuffling And Screening", <i>Proc Natl. Acad. Sci. USA</i> , 94(9):4504-4509 (1997)
<u>    </u> BA	Zhao et al., "Molecular Evolution by Staggered Extension Process (StEP) In Vitro Recombination", <i>Nature Biotech.</i> , 16:258-261 (1998)

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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<b>FORM PTO-1449 (Modified)</b> <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)</b>			Attorney Docket No.: <u>02-020522US</u> Applicant: <u>Stemmer et al.</u> Filing Date: <u>March 25, 1996</u>		Application No.: <u>08/621,839</u> <u>unassigned</u> Group: <u>1634</u>	
<b>Reference Designation</b>			<b>U.S. PATENT DOCUMENTS</b>			Page 1
Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
AA	5,830,721	11/03/98	Stemmer et al.			
AB	5,811,238	09/22/98	Stemmer et al.			
AC	5,763,192	06/09/98	Kauffman et al.			
AD	5,723,323	03/03/98	Kauffman et al.			
AE	5,814,476	09/29/98	Kauffman et al.			
AF	5,817,483	10/06/98	Kauffman et al.			
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AH						
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	Document No.	Date	Country	Class	Sub-class	Translation (Yes/No)
<b>OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>						
<b>EXAMINER</b>			<b>DATE CONSIDERED</b>			

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FORM PTO-1449 (Modified)

Attorney Docket

Serial No.:

018097-014612US

08/621,859

unassigned

LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

(Use several sheets if necessary)

Applicant: Stemmer and Crameri

Filing Date:

Group:

March 25, 1998 unassigned 1807

## Reference Designation

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___ AA	4,994,368	02/19/91	Goodman et al.			
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___ AC	5,093,257	03/03/92	Gray			
___ AD	5,223,408	06/29/93	Goeddel et al.			
___ AE	5,279,952	01/18/94	Wu			
___ AF	5,360,728	12/01/94	Prasher			
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___ AH	5,541,309	07/30/96	Prasher			
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___ AK	EP 252666 B1	01/13/88	Europe			
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___ AR	Berger et al. "Phoenix mutagenesis: One-step reassembly of multiply cleaved plasmids with mixtures of mutant and wild-type fragments" <u>Anal. Biochem.</u> 214:571-579 (1993).

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FORM PTO-1449 (Modified)  LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Attorney Docket <del>018097-014612US</del> <b>02-020522US</b>	Serial No.: <del>00/621,859</del> <b>Unassigned</b>
		Applicant: Stemmer and Crameri	
		Filing Date: <b>Unassigned</b> <del>March 25, 1996</del>	Group: 1807
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___ AS	Berkhout et al. "In vivo selection of randomly mutated retroviral genomes" <u>Nucleic Acids Res.</u> 21:5020-5023 (1993).		
___ AT	Cadwell et al. "Randomization of genes by PCR mutagenesis" <u>PCR Methods and Applications</u> 2:28-33 (1992). ( <i>previously submitted</i> )		
___ AU	Calogero et al. "In vivo recombination and the production of hybrid genes" <u>Microbiol. Lett.</u> 97:41-44 (1992).		
___ AV	Caren et al. "Efficient sampling of protein sequence space for multiple mutants" <u>Biotechnology</u> 12:517-520 (1994).		
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___ AX	Feinberg and Vogelstein "A technique for radiolabeling DNA restriction endonuclease fragments to high specific activity" <u>Anal. Biochem.</u> 132:6-13 (1983).		
___ AY	Heim et al. "Wavelength mutations and postranslational autoxidation of green fluorescent protein" <u>Proc. Natl. Acad. Sci. USA</u> 91:12501-12504 (1994).		
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Applicant: Stemmer and Crameri		Filing Date: <i>Unassigned</i> March 25, 1996		Group: 1807	
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___ AAG	Meyerhans et al. "DNA recombination using PCR" <u>Nucleic Acids Res.</u> 18:1687-1691 (1990).				
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___ AAJ	Pompon et al. "Protein engineering by cDNA recombination in yeasts: Shuffling of mammalian cytochrome P-450 functions" <u>Gene</u> 83:15-24 (1989).				
___ AAK	Reidhaar-Olson et al. "Combinatorial cassette mutagenesis as a probe of the informational content of protein sequences" <u>Science</u> 241:53-57 (1988).				
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___ AAM	Stemmer et al. "Selection of an active single chain Fv antibody from a protein linker library prepared by enzymatic inverse PCR" <u>BioTechniques</u> 14:256-265 (1992).				
___ AAN	Stemmer et al. "Rapid evolution of a protein in vitro by DNA shuffling" <u>Nature</u> 370:389-391 (1994). <i>(previously submitted)</i>				
___ AAO	Stemmer et al. "DNA shuffling by random fragmentation and reassembly: In vitro recombination for molecular evolution" <u>Proc. Natl. Acad. Sci. USA</u> 91:10747-10751 (1994). <i>(previously submitted)</i>				
EXAMINER		DATE CONSIDERED			

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FORM PTO-1449 (Modified)

Attorney Docket No.

Serial No.:

~~18097-020500~~ 02-020522US 08/769,062 *unassigned*LIST OF PATENTS AND PUBLICATIONS FOR  
APPLICANT'S INFORMATION DISCLOSURE  
STATEMENT

(Use several sheets if necessary)

Applicant: PHILLIP A. PATTEN et al.

Filing Date: ~~12/18/96~~  
*unassigned*

Group: Unknown

## Reference Designation

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Examiner Initial	Document No.	Date	Name	Class	Sub-class	Filing Date (If Appropriate)
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___ AB	3,850,752	11/26/74	Schuurs et al.	G01N 31	14	
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___ AF	4,277,437	07/07/81	Maggio	G01N 33	54	
___ AG	4,366,241	12/28/82	Tom et al.	G01N 33	54	
___ AH						
___ AI						
___ AJ						
___ AK						
___ AL						

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___ AM	WO 94/12305	06/09/94	PCT	B23B 51	00	Yes
___ AN	WO 95/11995	05/04/95	PCT	C12Q 1	68	No
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___ AT	Barak, L.S. et al., "The Conserved Seven-Transmembrane Sequence NP(X) <sub>2</sub> Y of the G-Protein-Coupled Receptor Superfamily Regulates Multiple Properties of the $\beta_2$ -Adrenergic Receptor," <u>Biochemistry</u> 34:15407-15414 (1995)
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___ AW	Benka, M.L. et al., "The thrombin receptor in human platelets is coupled to GTP binding protein of the $G\alpha_q$ family," <u>FEBS Letts.</u> 363:49-52 (1995)
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___ AY	Bird, R.E. et al., "Single-Chain Antigen-Binding Proteins," <u>Science</u> 242:423-426 (1988)
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___ BA	Cadwell, R.C. et al., "Randomization of Genes by PCR Mutagenesis," <u>PCR Methods and Applications</u> 2:28-33 (1992)
___ BB	Cantwell, C.A. et al., "Cloning and expression of a hybrid <i>Streptomyces clavuligerus</i> cef E gene in <i>Penicillium chrysogenum</i> ," <u>Curr. Genet.</u> 17:213-221 (1990)
___ BC	Chen, C.C.H. et al., "Structure of a Phosphonate-inhibited $\beta$ -Lactamase, An Analog of the Tetrahedral Transition State/Intermediate of $\beta$ -Lactam Hydrolysis," <u>J. Mol. Biol.</u> 234:165-178 (1993)
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___ BE	Chong, S. et al., "Protein Splicing Involving the <i>Saccharomyces cerevisiae</i> VMA Intein," <u>J. Biol. Chem.</u> 271(36):22159-22168 (1996)
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___ BH	Cramer, A. et al., "Improved Green Fluorescent Protein by Molecular Evolution Using DNA Shuffling," <u>Nature Biotech.</u> 14:315-319 (1996)
___ BI	Dangl, J.L. et al., "Rapid Isolation of Cloned Isotype Switch variants Using Fluorescence Activated Cell Sorting," <u>Cytometry</u> 2(6):395-401 (1982)
___ BJ	Dierick, H. et al., "Incorporation of DITP or 7-deaza dGTP during PCR improves sequencing of the product," <u>Nucl. Acids Res.</u> 21(18):4427-4428 (1993)
___ BK	Duncan, R. et al., "Polymer Conjugates, Pharmacokinetic Considerations for Design and Development," <u>Clin. Pharmacokinet.</u> 27(4):290-306 (1994)
___ BL	Dunn, I.S., "Assembly of Functional Bacteriophage Lambda Virions Incorporating C-Terminal Peptide or Protein Fusions with the Major Tail Protein," <u>J. Mol. Biol.</u> 248:497-506 (1995)
___ BM	Fish, E.N. et al., "Human Leukocyte Interferon Subtypes have Different Antiproliferative and Antiviral Activities on Human Cells," <u>Biochem. Biophys. Res. Commun.</u> 112(2):537-546 (1983)
___ BN	Gascoigne, N.R.J. et al., "Secretion of a chimeric T-cell receptor-immunoglobulin protein," <u>Proc. Natl. Acad. Sci. U.S.A.</u> 84:2936-2940 (1987)
___ BO	Gates, C.M. et al., "Affinity Selective Isolation of Ligands from Peptide Libraries Through Display on a lac Repressor 'Headpiece Dimer'" <u>J. Mol. Biol.</u> 255:373-386 (1996)

FORM PTO-1449 (Modified)		Attorney Docket No. <del>18097-020500</del> 62-02052205	Serial No.: <del>08/769,062</del> <i>unassigned</i>
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant: PHILLIP A. PATTEN et al.	
		Filing Date: <i>unassigned</i> 12/18/96	Group: Unknown
___ BP	Gram, H. et al., "Phage display as a rapid gene expression system: production of bioactive cytokine-phage and generation of neutralizing monoclonal antibodies," <u>J. Immunological Methods</u> 161:169-176 (1993)		
___ BQ	Hartl, F.U., "Molecular chaperones in cellular protein folding," <u>Nature</u> 381:571-580 (1996)		
___ BR	Higazi, A.A et al., "Single-Chain Urokinase-Type Plasminogen Activator Bound to its Receptor is Relatively Resistant to Plasminogen Activator Inhibitor Type 1," <u>Blood</u> 87(9):3545-3549 (1996)		
___ BS	Hogan, J.C., "Directed combinatorial chemistry," <u>Nature Supp.</u> 384:17-19 (1996)		
___ BT	Holskin, B.P. et al., "A Continuous Fluorescence-Based Assay of Human Cytomegalovirus Protease Using a Peptide Substrate," <u>Anal. Biochem.</u> 226:148-155 (1995)		
___ BU	Horisberger, M.A. et al., "Interferon-Alpha Hybrids," <u>Pharmac. Ther.</u> 66(3):507-534 (1995)		
___ BV	Hu, R. et al., "Evidence for Multiple Binding Sites for Several Components of Human Lymphoblastoid Interferon- $\alpha$ ," <u>J. Biol. Chem.</u> 268(17):12591-12595 (1993)		
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___ BX	Kang, Y.S. et al., "Effects of Expression of Mammalian G $\alpha$ and Hybrid Mammalian-Yeast G $\alpha$ Proteins on the Yeast Pheromone Response Signal Transduction Pathway," <u>Mol. Cell Biol.</u> 10(6):2582-2590 (1990)		
___ BY	Khosla, C. et al., "Generation of polyketide libraries via combinatorial biosynthesis," <u>TIBTECH</u> 14 (1996)		
___ BZ	Kim, B. et al., "Human immunodeficiency virus reverse transcriptase substitutes for DNA polymerase I in <i>Escherichia coli</i> ," <u>Proc. Natl. Acad. Sci. U.S.A.</u> 92:684-688 (1995)		
___ CA	Kirpekar, F. et al., "7-Deaza Purine Bases Offer a Higher Ion Stability in the Analysis of DNA by Matrix-assisted Laser Desorption/Ionization Mass Spectrometry," <u>Rapid Communications in Mass Spectrometry</u> 9:525-531 (1995)		
___ CB	Kontsek, P., "Human Type I Interferons: Structure and Function," <u>Acta Virologica</u> 38:345-360 (1994)		
___ CC	Kristensen, C. et al., "A single-chain insulin-like growth factor I/insulin hybrid binds with high affinity to the insulin receptor," <u>Biochem. J.</u> 305:981-986 (1995)		
___ CD	Langer, J.A. et al., "Binding of Human Alpha-Interferons to Natural Killer Cells," <u>J. Interferon Res.</u> 6:97-105 (1986)		
___ CE	Lathrop, R.H. et al., "Global Optimum Protein Threading with Gapped Alignment and Empirical Pair Score Functions," <u>J. Mol. Biol.</u> 255:641-665 (1996)		
___ CF	Levichkin, I.V. et al., "A New Approach to Construction of Hybrid Genes: Homolog Recombination Method," <u>Mol. Biol.</u> 29(5):572-577 (1995)		
___ CG	Li, J. et al., "Single Chain Human Interleukin 5 and Its Asymmetric Mutagenesis for Mapping Receptor Binding Sites," <u>J. Biol. Chem.</u> 271(4):1817-1820 (1996)		
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LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant: PHILLIP A. PATTEN et al.	
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— CI	Lundberg, K.S. et al., "High-fidelity amplification using a thermostable DNA polymerase isolated from <i>Pyrococcus furiosus</i> ," <u>Gene</u> 108:1-6 (1991)
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— CK	Matthews, D.J. et al., "Substrate Phage: Selection of Protease Substrates by Monovalent Phage Display," <u>Science</u> 260:1113-1117 (1993)
— CL	McCafferty, J. et al., "Selection and Rapid Purification of Murine Antibody Fragments That Bind a Transition-State Analog by Phage Display," <u>Applied Biochem. Biotech.</u> 47:157-173 (1994)
— CM	Medberry, S.L. et al., "Intra-chromosomal rearrangements generated by Cre-lox site-specific recombination," <u>Nucl. Acids Res.</u> 23(3):485-490 (1995)
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